3. Anitha Thomas (2010b). A Comparison between the Exact solution and the Two Numerical Solutions to the Anomalous relaxation or the Fractional Kinetic Equation, *South East Asia Journal of Mathematics and Mathematical Sciences*, Volume 9, Number 3(2010), 71-84.

4. Anitha Thomas (2011b). On Fractional Time-independent Form of the Wave Equation or Diffusion Equation, Proceedings of the International Conference on Mathematical Sciences, St. Thomas College, Pala, Kerala, India, 3-5 January 2011.

5. Anitha Thomas (2011c). Some Special Functions and Fractional Laplace Equation. (Communicated to *Indian Journal of Mathematics*).

References

Abel, N. H., Solution de quelques problèmes à l'aide d'intégrales définite [Norwegian], $Magazin\ for\ Naturvidenskaberne.$ Aargang 1, Bind 2, Christiana, (1823).

Agarwal, R. P., A propos d'une note de M. Pierre Humbert, $C.\ R.\ Acad.\ Sci.\ Paris.$ $\mathbf{236}$, (1953), 2031-2032.

Babenko, Yu. I., $Heat\ and\ Mass\ Transfer$, Chimia, Leningrad, (1986).

Beghin, L. and Orsingher, E., Fractional Poisson processes and related planar random motions, $Electronic\ Journal\ of\ Probability.$ $\mathbf{14}$, (2009) 17901826.

Barnes, E. W., The asymptotic expansion of integral functions defined by Taylor series. $Phil.\ Trans.\ Roy.\ Soc.\ London\ A.$ $\mathbf{206}$, (1908), 249-297.

Boersma, J., On a function which is a special case of Meijer's G-function. *Computational Mathematics*. **15**,(1962), 34-63.

Caputo, M., *Elasticità e Dissipazione*, Zanichelli, Bologna. (1969).

Davis, H. T. *The Theory of Linear Operators*. The Principia Press, Bloomington, Indiana. (1936).

Dzherbashyan, M. M., On the integral transformationas generated by the generalizes Mittag-Leffler function (in Russian). *Izv.AN.Arm.SSR.*. **13(3)**, (1960), 21-63.

Dzherbashyan, M. M., *Integral Transforms and Representation of Functions in Complex Domain* (in Russian). Nauka, Moscow. (1966).

Dzherbashyan, M. M. *Harmonic Analysis and Boundary Value Problems in the Complex Domain*. BirkhaeuserVerlag, Basel, London. (1993).

Erdélyi, A., Transformation of hypergeometric integrals by means of fractional integration by parts. *Quart. J. Math. Oxford Ser.*. **10**, (1939), 176-189.

Erdélyi, A., Magnus, W., Oberhettinger, F. and Tricomi, F.G., *Higher Transcendental Functions*. Vol.**III**. McGraw-Hill, New York. (1955).

Euler, L., De progressionibus transcendentibus seu quarum termini generales algebraice dari nequeunt. *Acta Academiae Scientiarum Imperialis Petropolitanee.* (1738), Trans. S. G. Langton, University of San Diego, (1999).

Erdélyi, A., Transformation of hypergeometric integrals by means of fractional integration by parts. *Quart. J. Math. Oxford Ser.*. **10**, (1939), 176-189.

Fox, C., The G and H functions as symmetrical Fourier kernals. *Transactions of the American Mathematical Society*. **98**, (1961), 365-429.

Feller, W., On a generalization of Marcel Riesz' potentials and semi-groups generated by them. *Meddelanden Lunds Universitets Matematiska Seminarium*. Tome suppl. dédié a M. Riesz, lund (1952), 73-81.

Flomenbom, O., and Klafter, J., Closed-form solutions for continuous time random walks on finite chains. *Phys. Rev. Lett.*. **(95)**, (2005), 098105.

Fujita, Y., Integro-differential equation and the wave equation (II). *Osaka Journal of Mathematics*. **27** (2), (1990), 309-321.

Fourier, J., Mémoire sur la tempéturees du globe terrestre et des escapes planétaires. *Mémoires of The Royal Academy of Sciences of Institut de France.* Trans. W. M. Connolley (1827), 569-604.

Gelfand, I. M. and Shilov, G. F., *Generalized Functions, Vol. I,* Academic Press, London, (1964).

Glöckle, W. G. and Nonnenmacher, T. F., Fractional integral operators and Fox functions in the theory of viscoelasticity. *Macromolecules American Chemical Society*. **24**, (1993), 6426-6434.

Grünwald, A. K. Über begrezte Derivationen und deren Anwendung. Z. *Angew Math. Phys.*. **12**(1867), 441-480.

Gorenflo, R. and Mainardi, F., Fractional Calculus: integral and differential equations of fractional order. in: A. Carpinteri and F. Mainardi (Editors), *Fractals and Fractional*

Calculus in Continuum Mechanics. Springer Verlag, Wien .(1997), pp. 223-276.

Gorenflo, R. and Vessella, A., *Abel Integral Equations: Analysis and Applications.* Springer Verlag, Berlin. (1991).

Hardy, G. H. and Littlewood, J. E., Some properties of fractional integrals. *Proc. London Math.Soc.*. **24**, (1926) .

Heaviside, O.,On the forces, stresses and fluxes of energy and electromagnetic field. *Philosophical Transaction of the Royal Society.* **A(183)**, (1892), 423-480.

Holmgren, H., Om differntialkalkylen med indices af hvad natur som helst. *Kongl. Svenska Vetenskaps-Akad. Hanl. Stockholm*. **5** No. 11 (1865), 1-83.

Hifer, R., *Applications of Fractional Calculus in Physics*. World Scientific, Singapore. (2000).

Hille, E. and Tamarkin, J. D., On the theory of linear integral equations. *Annals of Mathematics* . **31**, (1930), 479-528.

Holmgren, H., Om differntialkalkylen med indices af hvad natur som helst. *Kongl. Svenska Vetenskaps-Akad. Hanl. Stockholm* **5** No. 11 (1865), 1-83.

Humbert, P. and Agarwal, R. P., Sur la fonction de Mittag-Leffler et quelquesunes de ses généalisations. *Bull. Sci. Math.(Ser.II)*. **77**, 180, (1953).

Kilbas, A. A., Srivastava, H. M. and Trujillo, J. J., *Theory and Applications of Fractional Differential Equations*, Elsevier, Amsterdam. (2006).

Kiryakova, V., *Generalized Fractional Calculus & Applications.* Longman, Harlow (1994).

Kiryakova, V. S., Multiple (multi-index) Mittag-Leffler functions and relations to generalized fractional calculs. *J.Comp. Appl. Math.*. **118**,(2000), 241-259.

Krätzel, E., Integral transformations of Bessel type. *Generalized Functions & Operational Calculus.* (Proc. Conf. Verna), *Bulg. Acad. Sci. Sofia,* (1979), 148-165.

Krug, A., Theorie der derivation. Wie, *Academic der Wissenschaften, Denkenschriften, Math. Naturwissen-schaftliche Classe*. Vol. 57, (1890), pp. 151-228.

Kober, H., On fractional integrals and derivatives. *Quart. J. Math. Oxford Ser.*. **11**, (1940), 193-211.

Laurent, H., Sur le calcul des derivées à indices quelconques. *Nouvelles Annales de Mathematiques, Ser. 3,***3**, (1884), 240-252.

Laplace, P, S., *Théorie Analytique des Probabilité.* Paris. Courcier. (1812).

Letnikov, A. V., On historical development of differentiation theory with an arbitrary index. *Mat. Sb.*. **3**, (1868), 85-112.

Lévy, P., *Thérie de l'addition de variables aléatoires*. Editions Jacques Gabay, Paris, (1954).

Leibnitz, G. W., Opera ed. Dutens 3. *Commercium Philos. et Math.*. (1695), 105.

Liouville, J., Mémoire sur le calcul des differentielles à indices quelconques. *J. l'École. Roy. Polytéchn.*. **13**, Sect. 21, (1832), 71-162.

Liouville, J., Mémoire sur l'integration des équations differentielles à indices fractionnaires. *J. l'École. Roy. Polytéchn.*. **15** No.55, (1837), 55-84.

Love, E. R., Some integral equations involving hypergeometric functions. *Proc. Edinburgh Mathematical Society.*. **15(2)**, (1967), 169-198.

Lin, Y. and Xu, C., Finite difference/spectral approximation for the time-fractional diffusion equation. *Journal of Computational Physics*. **225**, (2007), 1533-1552.

Marco Raberto, Fabio Rapallo and Enrico Scalas, Semi-Markov graph dynamics, *arXiv:1105.2137v1 [math.PR] 11 May 2011*.

Marchuad, A., Sur les dérivéés et sur les différences des fonctions de variables réelles. *J. Math. Pures et Appl.*. **6** No. 4, (1927), 337-425.

Magin, R. L., *Fractional Calculus in Bioengineering.* Begell House Publishers, Connecticut. (2006).

Mainardi, F., Luchko Y. and Pagnani, G., The fundamental solution of the space-time fractional diffusion equation. *Fractional Calculus & Applied Analysis.* **4 No.2**. (2001), 153-192.

Mainardi, F., *Fractional Calculus and Waves in Linear Viscoelasticity*. World Scientific, Imperial College Press, London. (2010).

Mathai, A. M. and Haubold, H. J., *Special Functions for Applied Scientists*. Springer, New York, (2008).

Mathai, A. M., Saxena, R.K. and Haubold, H. J., *The H-Function: Theory and Applications*. Springer, New York. (2010).

Mc Bride, A. C., *Fractional Calculus and Integral Transforms of Generalized Functions.* Pitman, London. (1976).

Mellin, H. J., Abrip einereinhaitlichen Theorie der Gamma und der Hypergeometrischen Funktionen. *Math. Ann.*. **68**, (1910), 305-337.

Meijer, C. S., On the G-function I-VIII. *Neder. Akad. Westensch. Proc.*. **49**, (1946), 227-237.

Metzler, R. and Klafter, J., The random walks guide to anomalous diffusion: A fractional dynamics approach. *Phys. Rep.*. **339**, (2000), 1-77.

Mittag-Leffler, G. M., Sur la nouvelle fonction $E(X)$, *C.R. Acad. Sci., Paris (Ser II)*. **137**, (1903), 554-558.

Miller, K. S. and Ross, B., *An Introduction to the Fractional Calculus and Fractional Differential Equations.* Wiley, New York. (1993).

Nekrassov, P. A., Generalized differentiation. *Mat. Sb.*. **14**, (1888), 45-168.

Nigmatullin, R. R., The realization of the generalized transfer equation in a medium with fractal geometry. *Phys. Sta. Sol.(b)*. **133**, (1986), 425-430.

Nishimoto, K., *Fractional Calculus and its Application*. Nihon University, Tokyo. (1991).

Oldham, K. B. and Spanier, J., *The Fractional Calculus: Theory and Applications of Differentiation and Integration to Arbitrary Order.* Academic Press, New York, and Dover Publications, New York. (1974).

Ortigueira, M. D. and Tenreiro Machado, J. A., Fractional signal processing and applications. *Signal Processing*. **83**, (2003), pp.2285-2286.

Pincherele, S., Sulle funzoini ipergeometriche generalizzate. *Accademie dei Lincei, Rend. Cl. Sci. Fis. Mat. Nat. (Roma)*. **4**, (1888), 694-700.

Podlubny, I., *Fractional Differential Equations.* Academic Press, San Diego. (1999).

Podlubny, I., Matrix approach to discrete fractional calculus. *Fractional Calculus & Applied Analysis*. $\mathbf{3(4)}$, (2000), 358-386.

Prabhakar, T. R., A singular integral equation with a generalized Mittag-Leffler function in the kernel. *Yokohama Math. J.*. $\mathbf{19}$, (1971), 7-15.

Pu, Y., Wang, W. X., Zhou, J. L. Wand, Y. Y. and Jia, H. D., Fractional differential approach to detecting textural features of digital image and its fractional differential filter implementation, *Sci. China Ser. F Inf. Sci.*. $\mathbf{51(9)}$, (2008), pp.1319-1339.

Riemann, B., Versuch einer allgemeinen Auffassung der Integration und Differentiation, in *Bernhard Riemann's Gesammelte Mathematische Werke und Wissenschftliker Nachlass,* pp 331-344, Tuebner, Liepzig, (1876).

Riesz, M., L'intégrales de Riemann-Liouvlle et le problême de Cauchy. *Acta Math.*. $\mathbf{81}$, No. 1-2, (1949), 1-223.

Rubin, R., *Fractional Integrals and Its Applications*. Springer Verlag, Berlin. (1975).

Saichev, A. and Zaslavsky, G., Fractional kinetic equations: solutions and applications. *Chaos*. $\mathbf{7(4)}$, (1997), 753-764.

Samko, S. G., Kilbas, A. A. and Marichev, O. I., *Fractional Integrals and Derivatives: Theory and Applications.* Gordon and Breach Science Publishing, Yverdon. (1993).

Saxena, R. K., Mathai A. M. and Haubold, H. J., On fractional kinetic equations. *Astrophysics & Space Sciences,* $\mathbf{290}$, (2002), 299-310.

Saxena, R. K., Mathai A. M. and Haubold, H. J., On generalized fractional kinetic equations. *Physica A*, **344**, (2004b), 649-656.

Saxena, R. K., Mathai A. M. and Haubold, H. J., Solution of generalized fractional diffusion equations. *Astrophysics & Space Science.* **305**, (2007), 305-313.

Saxena, R. K., Mathai A. M. and Haubold, H. J., Solutions of fractional reaction-diffusion equations in terms of Mittag-Leffler functions. *Int. J. Sci. Res.*. **15**, (2006), 1-17.

Schneider, W. R. and Wyss, W., Fractional diffusion and wave equations. *Journal of Mathematical Physics.* , **30**, (1989), 134-144.

Sparavigna, A. C., Fractional differentiation based image processing, Computer Vision and Pattern Recognition (cs.CV). *arXiv:0910.2381v2*, (2009).

Wiman, A., Ueber den Fundamentalsatz im der Theorie de Funktionen $E(X)$. *Acta Math.*. **29**, (1905), 191-201.

Wright, E. M., The asymptotic expansion of the generalized Bessel functions. *Proc. London Math. Soc.*. **38(2)**, (1934), 257-270.

Wright, E. M., The asymptotic expansion of generalized hypergeometric function. *Journal of London Mathematical Scociety.* **10** (1935), 286-293.

Weyl, H., Bemerkungen zum begriff des differentialquotientten gebrochener ordnung. *Vierteljahresschrift der Naturforshenden Geselischaft in Zúrich.* **62** No.1-2, (1917), 296-302.

Wiman, A., Ueber den fundamentalsatz im der theorie de funktionen $E(X)$. *Acta Math.*. **29**, (1905), 191-201.

Wyss, W., The fractional diffusion equation. *J. Math. Phys.* **27**, (1986), 2782 .

Zaslavsky, G. M., *Hamiltonian Chaos and Fractional Dynamics.* Oxford University Press, Oxford. (2005).

Zygmund, A., A theorem on fractional derivatives. *Duke Math. Journal.* **12, (1945), 455-464.**